

REMARKS

Claims 1-20 were pending in this application. By way of this amendment and reply to the Office Action mailed November 20, 2002, claims 1 and 10 have been amended, and new claim 21 has been added. Please note that the amendments to claims 1 and 10 are very minor in nature, and do not affect the scope of these claims. Claims 1-21 are presently pending for consideration on the merits.

Submitted with this amendment and reply is a certified copy of the priority document.

In the Office Action, claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,351,465 to Han in view of U.S. Patent No. 6,185,213 to Katsube et al. This rejection is traversed for at least the reasons given below.

First, regarding independent claim 1, the Office Action incorrectly asserts that column 6, lines 1-8 and lines 26-35 of Han discloses selecting one router among a plurality of routers. Column 6, lines 1-8 and 26-35 of Han merely describes that there are four routers 42, 44, 46 and 48 connected to an ATM router 50, and that four cut-through paths 52, 54, 56 and 58 can be set up at the ATM router 50. Column 6 of Han fails to mention any selection of a next hop router.

The Office Action correctly recognizes that Han fails to disclose selecting one router among a plurality of routers so as to contribute a load balancing, but then erroneously asserts that Katsube discloses this in column 2, lines 47-49 and column 8, lines 40-45 and 60-67.

However, column 2, lines 47-49 of Katsube only refers to the reduction of the load of an address analysis processing to be carried out at a specific router, which has nothing to do with a load balancing among a plurality of other routers connected to a specific router. Also, column 8, lines 40-67 of Katsube only describes the use of an ATM cell routing table or an IP routing table to determine whether or not to use a VC or VP cut-through. This portion of Katsube also fails

to disclose any teaching for selecting a next hop router for the purpose of contributing to a load balancing.

Thus, both Han and Katsume fail to disclose anything corresponding to the claimed selecting step for selecting a next hop router so as to contribute to a load balancing, according to information regarding a state of cut-through path set up, and therefore claim 1 is patentable over the combination of Han and Katsume.

The same argument also holds for the dependent claims 2-9 as well as corresponding router device and computer usable medium claims 14-16 and 19.

Furthermore, dependent claim 5 recites the assigning of residue values and using it to select one of a plurality of already set up cut-through paths for a new cut-through path. Column 8, lines 40-67 and column 9, lines 1-4 of Katsume does not teach or suggest any use of residue values, and thus is not pertinent to the feature recited in claim 5.

Next, regarding independent claim 10, the Office Action incorrectly sets forth basically the same reason as that set forth for claim 1.

However, it should be clearly understood that claim 10 significantly differs from claim 1 in that claim 10 requires selecting one cut-through path among a plurality of cut-through paths, and changing a route of the selected cut-through path so as to contribute to the load balancing.

In this regard, column 6, lines 1-8 and 26-35 of Han, as quoted in the Office Action fails to disclose any teaching for selecting a cut-through path among a plurality of cut-through paths and changing its route for the purpose of contributing to the load balancing (in fact, Han completely fails to disclose any teaching related to load balancing), and column 2, lines 47-49 and column 8, lines 40-45 and 60-67 of Katsume as quoted in the Office Action also fail to disclose any teaching for selecting a cut-through path and changing its route for the purpose of contributing to load balancing (in fact, Katsume fails to disclose any teaching related to load balancing).

for the purpose of contributing to load balancing (in fact, Katsube fails to disclose any teaching related to load balancing).

Thus, both Han and Katsube fail to disclose anything corresponding to the claimed selecting step for selecting a cut-through path and changing a route of that cut-through path so as to contribute to a load balancing, and therefore claim 10 is patentable over the combination of Han and Katsube.

The same argument also holds for the dependent claims 11-13 as well as corresponding router device and computer usable medium claims 17-18 and 20.

New claim 21 has been added to recite additional features of the present invention that are not believed to be disclosed, taught or suggested by the cited art of record, alone or in combination.

Therefore, Applicant believes that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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Date


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MARKED UP VERSION SHOWING CHANGES MADE**Below are the marked up amended claims:**

1. (Amended) A cut-through path control method at a router device at which multi-path exists, comprising [the steps of]:

selecting one router among a plurality of routers that can possibly be a next hop router so as to contribute to a load balancing, according to a whole or a prescribed part of information regarding a state of cut-through path set up in which the router device is involved, at a time of setting up a cut-through path in the multi-path; and

[carries] carrying out a prescribed control for setting up the cut-through path with said one router as the next hop router.

10. (Amended) A cut-through path control method at a router device at which multi-path exists, comprising [the steps of]:

selecting one cut-through path that contributes to a load balancing when a route change is made, among cut-through paths for which the route change at the router device is possible; and

changing a route of said one cut-through path so as to contribute to the load balancing.

21. (New) The method of claim 2, wherein the setting up of the cut-through path starts at a timing of receiving a message for setting up the cut-through path from a node device on an upstream side of said router device, and wherein said selecting step selects said one router according to a number of already set up cut-through paths that are used to route packets to a same destination node that is also included in the message for setting up the cut-through path that is received by said router device.